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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,866	12/08/2000	Katsuto Nagano	200083US0CONT	1107

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EXAMINER
YUN, JURIE

ART UNIT	PAPER NUMBER
2882	13

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/731,866	NAGANO ET AL.	
	Examiner	Art Unit	
	Jurie Yun	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 July 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 December 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *21* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Priority

1. Acknowledgment is made of applicants claim for foreign priority under 35 U.S.C. 119(a)-(d). However, the foreign priority cannot be granted because applicants intermediate claim for benefit under 35 U.S.C. 120 is improper. Specifically, the reference to establish benefit under 35 U.S.C. 120 in the first sentence of this application does not identify the relationship of the instant application to the prior international application PCT/JP00/02231, filed 4/6/00. For benefit claims under 35 U.S.C. 120, the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part). Appropriate correction is required. See MPEP 201.11, item 111, section A, page 200-68, and MPEP 1895.

Drawings

2. Figures 2 and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagano et al. (USPN 6,428,914 B2).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

5. With respect to claim 1, Nagano et al. disclose an EL device comprising a first electrode (Fig. 7, 2), a first insulator layer (3), a thin film inorganic light emitting layer (4), a second insulator layer (5) and a second electrode layer (6) successively stacked on an electrical insulating substrate (1), wherein: at least one of said first insulator layer and said second insulator layer comprises barium titanate, magnesium oxide, manganese oxide, at least one oxide selected from barium oxide and calcium oxide, silicon oxide, and optionally yttrium oxide, wherein the amount of magnesium oxide, manganese oxide, yttrium oxide, barium oxide, calcium oxide and silicon oxide with respect to 100 moles of barium titanate is (column 7, line 51 – column 8, line 12):

MgO: 0.1 to 3 moles,

MnO: 0.05 to 1.0 mole,

Y_2O_3: 1 mole or less,

BaO + CaO: 2 to 12 moles, and

SiO_2: 2 to 12 moles.

6. With respect to claim 2, Nagano et al. disclose the electrical insulating substrate (column 5, lines 47-48) and the first insulator layer (column 12, lines 13-17) are each formed of a ceramic material.

7. With respect to claim 3, Nagano et al. disclose BaO, CaO and SiO_2 are present in at least one of the first and second insulator layers in the form of $(Ba_xCa_{1-x}O)_y.SiO_2$ where $0.3 <= x <= 0.7$ and $0.95 <= y <= 1.05$ and in an amount of 1 to 10% by weight with respect to the sum of the weights of $BaTiO_3$, MgO, MnO and Y_2O_3 (column 7, line 65 – column 8, line 12).

8. With respect to claims 4 and 5, Nagano et al. disclose the first electrode comprises one or two or more of Ni, Ag, Au, Pd, Pt, Cu, W, Fe, and Co or any one of Ag-Pd, Ni-Mn, Ni-Cr, Ni-Co and Ni-Al alloys (claim 19).

9. With respect to claim 6, Nagano et al. disclose the light emitting layer comprises at least one material selected from the group consisting of ZnS, Mn/CdSSe, ZnS:TbOF, ZnS:Tb, SrS:Ce, $(SrS:Ce/ZnS)_n$, $CaGa_2S_4$:Ce, and SrS:Ce/ZnS:Mn (column 11, lines 27-36).

10. With respect to claim 7, Nagano et al. disclose the light emitting layer has a thickness of 100 to 1000 nm (column 11, lines 46-47)).

11. With respect to claim 8, Nagano et al. disclose the second electrode comprises at least one material selected from the group consisting of tin-doped indium oxide, zinc-doped indium oxide, indium oxide, tin oxide, and zinc oxide (column 14, line 43).

12. With respect to claim 9, Nagano et al. disclose the amount of MgO relative to 100 moles of barium titanate is 0.5 to 1.5 moles (column 7, lines 57-58).

13. With respect to claim 10, Nagano et al. disclose the amount of MnO relative to 100 moles of barium titanate is 0.2 to 0.4 moles (column 7, lines 59-60).

14. With respect to claim 11, Nagano et al. disclose the ratio (BaO + CaO)/SiO_2 is in the range of 0.9 to 1.1 (column 7, lines 65-66).

15. With respect to claim 12, Nagano et al. disclose the amount of yttrium oxide is in the range of 0.1 to 1 moles relative to 100 moles of barium titanate (column 8, lines 9-12).

16. With respect to claim 13, Nagano et al. do not disclose the first insulator layer has an average crystal grain diameter of 0.2 to 0.7 *u*m. However, this is inherent when using the specific compositions used.

17. With respect to claim 14, Nagano et al. disclose the first electrode comprises a material selected from the group consisting of Ag, Pd, and Ag-Pd alloys (column 6, lines 24-27).

18. With respect to claim 15, Nagano et al. disclose the substrate comprises Al_2O_3 and optionally one or more oxides selected from the group consisting of SiO_2, MgO, and CaO (column 5, lines 47+).

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ogura et al. (USPN 5,055,360), Steele et al. (USPN 3,560,784), and Yano et al. (USPN 6,597,108 B2) disclose EL devices.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jurie Yun whose telephone number is 703 308-3535. The examiner can normally be reached on Monday-Friday 8:30-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 703 308-4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0956.

Jurie Yun
August 28, 2003

EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER